



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/971,872 | 10/04/2001 | Casey Prindiville | 6047-61247 | 5187 |

7590

04/07/2003

KLARQUIST SPARKMAN CAMPBELL LEIGH & WHINSTON, LLP

Attn: Lisa M. Caldwell
One World Trade Center, Suite 1600
121 S.W. Salmon Street
Portland, OR 97204-2988

EXAMINER

PATEL, ISHWARBHAI B

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/971,872

Applicant(s)

PRINDIVILLE ET AL.

Examiner

Ishwar (I. B.) Patel

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14, 23 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12, 23, 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 13, 14 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on November 18, 2002.
These drawings are approved.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-12,23 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Claims 10-12,23 and 37-38 are.

Regarding claims 10 and 23, Eng discloses a substrate of a support element, the substrate comprising:

an insulating material having a first surface (substrate 70, see figure 1, column 3, line 30-45);

a wire bond slot forming an opening through the substrate extending from the first surface to a second surface (see figure 1), but

fail to explicitly disclose a defective pattern of conductors on the first surface and a cover member attached to the substrate on the second surface so as to cover at least

a portion of the wire bond slot, wherein the cover member does not comprise a functional die.

Regarding a defective pattern of conductors on the first surface, it is common to have one or two circuits defective on a panel with multiple circuits, and it is not economical to discard the panels with one or two defective circuits and it is known not to cut and remove the defective circuit till the assembly is complete for all the other good circuits to have the continuity in the set manufacturing steps without any undue waste of time in adjusting the steps. Heo disclose one of such defective circuit; and

regarding a cover member attached to the substrate on the second surface so as to cover at least a portion of the wire bond slot, wherein the cover member does not comprise a functional die, as disclosed by Vindasius it is normal to receive non-functional or defective die from the manufacturer, see Vindasius, column 4, line 15-25, and as disclosed by Sheppard defective die will exist on the array of dies mounted on the support structure, see Sheppard column 4, line 60-67. Therefore, there will exist a defective circuit pattern or defective die on many die attach area of Eng and one of such defective die will work as a cover member.

Therefore, it would have been obvious to one having ordinary skill in the art to construe a defective pattern on the substrate covered with a cover member in the assembly of Eng, and the cover member being non functional die to avoid extra

expenditure on a special cover member, as there will be defective pattern as well as defective die as disclosed by Heo, Vindasius and Sheppard.

Regarding claim 11, Eng further discloses the cover member comprises a self-adhesive tap (adhesive layer 60 made of a double sided adhesive polyamide tape, see column 3, line 30-40).

Regarding claim 12, Eng further discloses a defective die as applied to claim 10 above.

Regarding claim 37 and 38, Eng further discloses the wire bond slot associated with defective pattern as applied to claim 10 above.

Allowable Subject Matter

4. Claims 13,14 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims allowed.

Response to Arguments

5. Applicant's arguments filed on November 18, 2002 have been fully considered but they are not persuasive.

The applicant's argument about no teaching of specifically utilizing defective die as a cover member at defective substrate site is considered. However, as disclosed by

Vindasius and Sheppard, defective die do exist and are supplied with the functional die and if such die with the exact required length and width are available, it will be obvious to one of ordinary skill in the art to use such defective die, instead of undue expenditure of procuring a special material with required size. Further, the defective die will have all the electrical and mechanical properties required for that particular application to avoid any kind of mismatch during the processing.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (8:30 - 5).


Application/Control Number: 09/971,872
Art Unit: 2827

Page 6

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Talbott can be reached on (703) 305 9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
April 4, 2003


KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800